

**ABSTRACT**

A method for processing echoes in a time-of-flight ranging system or level measurement system. The method comprises applying an entropy filter to the echo profile. The entropy filter comprises determining the information content in the echo profile. The entropy filter determines the occurrences of a pattern in the bit stream representing magnitudes in the echo profile. Repeated occurrences of the pattern are used to characterize the echo signal as having low randomness (i.e. higher information content) indicative of a potential echo pulse or as having high randomness (i.e. lower information content) indicative of noise.